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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590

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REPLY TO THE ATTENTION OF

**MEMORANDUM**

**SE-5J**

**DATE:** OCT 03 2002

**SUBJECT:** **ENFORCEMENT ACTION MEMORANDUM** - Determination of Threat to Public Health and the Environment at the R. Lavin & Sons Site, North Chicago, Lake County, Illinois  
(Site ID #B52E)

**FROM:** Brad Benning, On-Scene Coordinator  
Emergency Response Section II

**TO:** William E. Munro, Director  
Superfund Division

**THRU:** Richard Karl, Chief  
Emergency Response Branch

**I. PURPOSE**

The purpose of this memorandum is to document an imminent and substantial threat to public health, welfare, and the environment posed by the presence of uncontrolled hazardous substances located at the R. Lavin & Sons facility in North Chicago, Lake County, Illinois (the Site). Lead and cadmium are the hazardous substances that are found in high levels in sediments, slag and baghouse dust within the tanks and surface impoundments, waste piles and baghouses.

The Potentially Responsible Party (PRP) proposes limited response actions to mitigate threats to public health, welfare, and the environment posed by the presence of contaminated sediments located in three (3) large open-top storage tanks. Proposed removal actions include, but are not limited to, the removal and appropriate disposal of all water and sediment, and the decontamination of the tank structure prior to dismantling and/or demolition. The presence of hazardous substances located on the surface of the Site, the potential for migration off-site, and the Site's proximity to residential and commercial areas require that this removal be classified as a time-critical.

The Site is not on the National Priorities List (NPL)

## **II SITE CONDITIONS AND BACKGROUND**

The CERCLIS ID number for the Site is ILN000508448

### **Site Description**

#### **1. Removal site evaluation**

A Removal Site Assessment was conducted on May 15, 2002, to determine the extent of contamination of various potential waste sources currently onsite, and to obtain analytical data to warrant a potential removal action. Water and sediment samples were collected from 3 storage tanks, process pit, and 2 retention ponds. Waste samples were collected from the slag pile, cupola slag pile, and the baghouse dust. The samples were analyzed for Total and TCLP RCRA metals, and totals for 6 additional metals previously identified in their past discharge permits, including beryllium, cobalt, boron, manganese, nickel, and zinc. The results identified Total levels ranging from 110 to 10,600 ppm for lead and 11 to 160 ppm for cadmium, TCLP levels of 0.85 to 110 ppm for lead and 0.0 to 8.6 ppm for cadmium. Based on these two constituents the tank and pond sediments, slag, and baghouse dust would be classified as hazardous waste for disposal.

#### **2. Physical location**

The property is located at 2028 South Sheridan Road in North Chicago, Lake County, Illinois. Coordinates for the site are latitude 42 degrees 19' 22.6" North and longitude 87 degrees 50' 30.1" West, as determined by Arcview or Landview III. It is located in an industrial neighborhood with surrounding residential and commercial areas. The Site is approximately 17.5 acres and is located adjacent to Pettibone Creek which discharges to Lake Michigan.

A Region 5 Superfund Environmental Justice (EJ) analysis has been prepared for the area surrounding the Site. This analysis is presented in Attachment IV. In Illinois, the low-income percentage is 27 and the minority percentage is 25. To meet the EJ concern criteria, the area within 1 mile of the Site must have a population that is twice the state low-income percentage or/and twice the state minority percentage. That is, the area must be at least 54% low-income and/or 50% minority. At this site, the low-income percentage is 48.0% and the minority is 72.0% as determined by Arcview or Landview III EJ analysis. Therefore, this Site does meet the Region's EJ criteria based on demographics as identified in Region 5 Interim Guidelines for Identifying and Addressing a Potential EJ Case, June 1998.

#### **3. Site characteristics**

R. Lavin & Sons, Inc. began operating a secondary copper and brass recovery facility in 1941. Scrap copper and brass in many forms were imported from off-site sources, melted and refined in

furnaces, and then poured into ingots that were shipped to customers. R. Lavin & Sons, Inc. fell under SIC Code 3341 and had approximately 200 employees. The facility was upgraded several times in advance of and in response to environmental regulations. Upgrades included installation of several baghouses; improvement of a closed-loop, cooling water recirculating system; implementation of surface run-off containment and control measures. Currently R. Lavin & Sons, Inc. is non-operational and in a liquidating bankruptcy with its assets being sold for cash by its creditors. Areas of concern on-site include the three open top storage tanks with 2.6 million gallons of capacity, the two retention ponds that directly discharge to the storm sewer, the process pit, the slag piles most of which are outside and uncovered, and the numerous baghouses throughout the facility.

#### **4. Release or threatened release into the environment of a hazardous substance, or pollutant or contaminant.**

Releases of contaminants to the storm sewer have been and continue to be an ongoing problem at this Site. Wastes generated by furnace clean-outs, flue dust collection, and contact cooling water treatment have been subject to heavy precipitation that has resulted in contaminated runoff being released to the ground and then to the groundwater and/or storm sewer that runs to Pettibone Creek and then to Lake Michigan. In addition, large volumes of slag were stored outside and were exposed to rainfall. A 1994 study by Illinois EPA compared sediment concentrations of certain metals upstream and downstream of the Site's outfall into the Creek. The contaminants, copper, lead, and zinc were increased by 2387%, 3932%, and 2769%, respectively, downstream of the Site.

#### **B. Other Actions to Date**

##### **1. Previous actions**

On November 9 2001, at the request of the Department of Justice (DOJ), U. S. EPA observed conditions on-Site to formulate cost estimates for potential removal and remedial actions to be taken at the Site.

##### **2. Current actions**

U.S. EPA, conducted the removal assessment on May 15, 2002, and confirmed that the Site contains numerous sources of hazardous substances that pose a threat of release to the environment. The owner of the Site, R. Lavin & Sons, Inc., is in bankruptcy and its assets are being managed by the post-confirmation Creditors' Committee. The Creditors' Committee, on behalf of the debtor/owner, R. Lavin & Sons, Inc. is willing to enter into an AOC to address the three storage tanks on site, and if funds are still available to continue with additional removal actions on-site.

## **C. State and Local Authorities' Roles**

### **1. State and local actions to date**

The Illinois EPA has been the regulatory authority for inspections under the Site's NPDES permit, and the RCRA Hazardous Waste Regulations. The Site had been operating under a State Consent Decree since October 12, 1990. The most recent inspection by the State in December 2000, continued to indicate non-compliance with their NPDES Permit. The last RCRA inspection was conducted in October 1999, and indicated closure activities had been completed for the north impoundment and pile, and that the facility would continue post-closure care.

### **2. Potential for continued State/local response**

Due to potential subsurface soil and groundwater contamination at the Site, the State may continue to be involved to address these long-term concerns. The City of North Chicago is likely to be interested in any actions taken, as the Site may have potential for Brownfields redevelopment.

## **III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES**

A removal action is necessary at the R. Lavin & Sons Site to abate the threat to public health, welfare or the environment posed by the release and potential release of hazardous substances. The NCP, 40 C.F.R. 300.415(b)(2), provides eight specific criteria for evaluation of a threat and the appropriateness of a removal action. Observations documented during the Site investigation indicate that the Site meets the following criteria for a time-critical removal action:

### **A. Actual or potential exposure to hazardous substances or pollutants or contaminants by nearby populations, animals, or the food chain.**

This factor is present at the Site due to the large volume of material on site which is contaminated with elevated levels of lead and cadmium. Lead and cadmium were detected in the majority of the samples at concentrations much higher than the regulatory limit. The Site is located in a commercial and residential neighborhood and poses an attractive nuisance for young children. Due to the Site's closure and lack of maintenance, the baghouses may deteriorate and potentially release to the surrounding area large volumes of dust containing high levels of lead and cadmium, lead is considered a cumulative poison and poses an inhalation and ingestion hazard. Long-term exposure to lead can result in build-up in the body, an affect known as bioaccumulation. Prolonged exposure to lead could result in kidney damage, anemia, and decreased fertility. Elevated lead exposure before or during pregnancy may cause birth defects. Cadmium is a naturally occurring element that can be toxic. Long term exposure can result in

kidney disease, lung damage, and fragile bones

**B. Actual or potential contamination of drinking water supplies or sensitive ecosystems.**

This factor is present at the Site due to the potential for continued releases of contaminants to the storm sewer which discharges to Pettibone Creek and is a tributary to Lake Michigan. An Illinois EPA 2000 Water Quality Report listed this waterway as being "impaired," and described the Great Lakes Naval Training Center Harbor as "fully non-supportive." Subsurface soils are contaminated with heavy metals, and past groundwater analysis has indicated high lead levels, up to 1250 times the MCL.

**C. Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers that may pose a threat of release.**

This factor is present at the Site due to presence of three open-top storage tanks, and two retention ponds which contain sediments that are hazardous for lead and cadmium. Failure to address these storage units may result in future releases of hazardous substances to the environment.

**D. Weather conditions that may cause hazardous substances or pollutant or contaminants to migrate or be released;**

This factor is present at the Site due to heavy precipitation that could affect contaminated contents of the slag piles, tanks, and retention ponds. Uncovered slag piles that are stored outside and exposed to precipitation, resulting in contaminated run-off being released to the storm sewer. The open-top tanks are subject to heavy precipitation that could cause an overflow of the contents of the tanks and, thus, an eventual release of contamination onto the ground and then into the groundwater and/or the storm sewer (that eventually runs to Pettibone Creek). These uncovered tanks are also susceptible to freezing and thawing and more rapid deterioration that could result in structural damage that would result in release of hazardous contaminants. The retention ponds have minimal freeboard and any significant precipitation would pose a threat of release to the storm sewer.

**IV. ENDANGERMENT DETERMINATION**

Given the current conditions at the Site and the nature of the hazardous substances on-site, actual or threatened releases of hazardous substances from this Site, if not addressed by implementing and completing the response actions selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, welfare, or the environment. The possibility of further releases of the hazardous substances present a threat to the nearby population and the environment via the exposure pathways described in Section III.

## V. PROPOSED ACTIONS

There are obvious time-critical elements present at the Site. The hazardous substances are located near industrial and residential areas, and must be immediately addressed. The proposed removal actions at the site would eliminate the imminent and substantial threats to human health, welfare, or the environment, as outlined in this memorandum.

The following response actions are proposed to mitigate threats posed by the presence of hazardous substances at the Site. The actions will be prioritized due to limited funds, and will continue until funding is exhausted.

- a. Develop and implement a site-specific work plan including a proposed time line.
- b. Develop and implement a site-specific health and safety plan.
- c. Establish and maintain site security measures during the removal actions, which may include security guard service.
- d. Identify, sample and characterize the hazardous substances located at the site.
- e. Remove all water and sediment from the bulk storage areas, treat water and sediment as necessary to reduce contaminant levels to allow for appropriate disposal. Implement actions in the following order: 1) Three above ground storage tanks (AST); 2) Concrete pit; 3) Two retention ponds.
- f. Decontaminate the three ASTs, and concrete pit prior to dismantling and/or demolition.
- g. Excavate contaminated soil under the retention ponds as necessary to conform with industrial soil remediation goals.
- h. Remove all furnace slag/cupola slag for appropriate disposal, and decontaminate waste pile storage areas.
- i. Remove all filters and flue dust from all baghouses on site, decontaminate all baghouses.
- j. Remove all other hazardous substances onsite, such as furnace brick, residual products in tanks and/or containers, and laboratory chemicals.
- k. Bulk, containerize, and consolidate wastes as necessary in preparation for off-site disposal to a U.S.EPA approved disposal facility.
- l. Prepare and submit a summary report of the removal actions.

All hazardous substances, pollutants or contaminants removed off-site pursuant to this removal action for treatment, storage or disposal shall be treated, stored or disposed of at a facility in compliance, as determined by U.S. EPA, with the U.S. EPA Off-Site Rule (40 CFR 300.440-58 Federal Register 49215 (Sept. 22, 1993)).

The removal action will be taken in a manner not inconsistent with the NCP. The OSC has begun planning for provisions of post-removal site control, consistent with the provisions of Section 300.415(1) of the NCP. It is envisioned that after implementation of this removal action there will be a need for post-removal site control and potential remedial activities to address contamination not addressed by the removal action including hazardous substances in subsurface soils, and groundwater.

All applicable and relevant and appropriate requirements (ARARs) of federal and state law will be complied with, to the extent practicable. A federal ARAR determined to be applicable for the Site is the RCRA Off-Site Disposal Policy. A state ARAR determined to be applicable for the Site is the Subtitle G Waste Disposal Regulations. Any additional federal and state ARARs will be addressed to the extent practicable. A letter dated September 3, 2002, was sent to the Illinois EPA requesting any additional ARARs appropriate for this site.

The response actions described in this memorandum directly address actual or threatened releases of hazardous substances, pollutants or contaminants at the Site which may pose an imminent and substantial endangerment to public health, welfare, or the environment. These response actions do not impose a burden on the affected property disproportionate to the extent to which that property contributes to the conditions being addressed.

## **VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN**

A delay or non-action at the Site may result in an increased likelihood of direct contact to human populations by the hazardous substances. Since the Site is easily accessible, the various threats to human health and/or the environment, pose a serious threat to the local population. Additionally, any delay or non-action will also increase the likelihood of contamination migration off-site into the surface waters and surrounding commercial and residential neighborhood.

## **VII. OUTSTANDING POLICY ISSUES**

No significant policy issues are associated with the R. Lavin & Sons site.



## VIII. ENFORCEMENT

For Administrative purposes, information concerning the enforcement strategy for this site is contained in the Enforcement Confidential addendum. (Attachment I)

## IX. RECOMMENDATION

This decision document represents the selected removal action for the R. Lavin & Sons site, located in North Chicago, Lake County, Illinois, developed in accordance with CERCLA as amended, and is not inconsistent with the NCP. This decision is based on the Administrative Record for the site (see Attachment II). Conditions at the site meet the criteria of Section 300.415(b)(2) of the NCP for a removal action and I recommend your approval of the proposed removal action.

APPROVE: W. E. Myers DATE: 10/3/02  
Director, Superfund Division

DISAPPROVE: \_\_\_\_\_ DATE: \_\_\_\_\_  
Director, Superfund Division

Attachments: I. Enforcement Confidential addendum  
II. Administrative Record  
III. Region 5 Superfund EJ Analysis

cc: R. Worley, U.S.EPA, OERR, 5202G  
Michael T. Chezick, U.S. Department of the Interior  
Custom House, Room 244  
200 Chestnut Street  
Philadelphia, PA 19106  
B. Everetts, Illinois EPA, Superfund Coordinator

**ENFORCEMENT ADDENDUM**

**R. LAVIN & SONS, INC. SITE  
NORTH CHICAGO, LAKE COUNTY, ILLINOIS**

**SEPTEMBER 2002**

**ENFORCEMENT CONFIDENTIAL  
NOT SUBJECT TO DISCOVERY**

**(REDACTED 2 PAGES)**

**NOT RELEVANT TO THE SELECTION OF THE REMOVAL ACTION**

[illegible]

ATTACHMENT II

U.S. ENVIRONMENTAL PROTECTION AGENCY  
REMOVAL ACTION

ADMINISTRATIVE RECORD  
FOR  
R. LAVIN & SONS SITE  
NORTH CHICAGO, LAKE COUNTY, ILLINOIS

ORIGINAL  
JULY 16, 2002

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
1	12/13/01	Benning, B., U.S. EPA	Kawakami, C., U.S. EPA	Memorandum re: Proposed Actions and Removal Cost Estimate for the R. Lavin & Sons Site	3
2	06/27/02	Tetra Tech EM, Inc.	U.S. EPA	Site Assessment Report for the R. Lavin Site	102
3	00/00/00	Benning, B., U.S. EPA	Muno, W., U.S. EPA	Action Memorandum: Determination of Threat to Public Health and the Environment at the R. Lavin & Sons Site (PENDING)	

# Region 5 Superfund EJ Analysis

## R. Lavin & Sons Site North Chicago, IL

